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ABSTRACT

One of the greatest challenges facing education today is the difference in achievement among students of varying ethnic and racial groups. Historically, Edmonds' and Lezotte's effective-schools' research indicated that some schools tended to educate students successfully without regard to students' categorical membership. The purpose of this study was to explore the impact of charter schools on the white-minority student-achievement gap in North Carolina. Using End-of-Grade scores in reading and math for a matched sample of charter-school and regular public-school students, grades 3 through 8, researchers found that the growth scores of all students tended to be less in charter schools. The achievement gap in charter schools, as contrasted with regular public schools, thus tended to increase, particularly for African-American students. Because neither charter nor regular public schools appeared to be reducing the achievement gap, the researchers recommend additional studies to identify ameliorating interventions. Appendix A contains two tables of total sample results, and Appendix B is a summary of independent evaluations of charter-school impact on student achievement. (Contains 19 references.) (RT)

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AN EXPLORATORY EXAMINATION OF NORTH CAROLINA CHARTER SCHOOLS AND THEIR POTENTIAL IMPACT ON WHITE-MINORITY ACHIEVEMENT GAP REDUCTION

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Abstract

The purpose of this study was to explore the impact of charter schools on the White-Minority student achievement gap in North Carolina. Using End-of-Grade scores in reading and math for a matched sample of charter school and regular public school students, grades 3 through 8, researchers found that the growth scores of all students tended to be less in charter schools. The achievement gap demonstrated in charter schools, as contrasted with regular public schools, thus tended to increase, particularly for African-American students. Proficiency scores tended to reveal similar disadvantages for charter school African-American students. To the extent that neither charter nor regular public schools appeared to be reducing the achievement gap, the researchers recommend additional studies to identify ameliorating interventions.

AN EXPLORATORY EXAMINATION OF NORTH CAROLINA CHARTER SCHOOLS AND THEIR POTENTIAL IMPACT ON WHITE-MINORITY ACHIEVEMENT GAP REDUCTION

Introduction

One of the greatest challenges facing education today is the difference in achievement among students of varying ethnic and racial groups. As a nation (and as North Carolinians) we have ostensibly aimed to educate all of our youth; yet evidence exists which suggests that we have neither uniformly attempted nor succeeded in the effort, especially in the case of economically disadvantaged African-American students. Haycock (1990, p. 53) exposed the fundamental problem over a decade ago in stating: "The notion here somehow is that we educate all kids the same. But somehow, Black kids, Brown kids, and poor kids don't learn as much. That is a serious misconception. In fact, we do not educate all children the same way."

Historically, Edmonds (1979) and Lezotte's (1989) Effective Schools' research indicated that some schools tended to educate students successfully without regard to students' categorical membership. That is, students within the top quartile of achievement were as likely to be children of color and poverty as children who are White and economically advantaged (Sudlow, 1985). Eventually, most 20th century educators came to believe that schools could make a positive, measurable difference in student achievement regardless of racial and socioeconomic status. Yet the student achievement gap stubbornly persists into the 21st century. The problem provokes the question: Why?

Since the 1970s, researchers have attempted to explain the White-Minority achievement gap (e.g., Coleman, 1972; Jencks et al., 1972). Building on extant

achievement gap research and literature, Bingham (1994) compiled a taxonomy of gap theories including those associated with individuals (genetic difference theory), family and community (cultural deprivation theory), home-school interaction (cultural difference theory), school itself (effective schools theory), and society and power structures (critical theory). The theories suggest a continuum of possible interventions ranging from the ideographic to the societal.

Although educators have tended to favor gap reduction solutions based on effective schools theory (Hassel, 2001), a persistent note of discord has resonated among critical theorists impatient for change and improvement. Representing this perspective, Hilliard dismissed what he termed false but popular causes such as socioeconomic status and cultural diversity: "The real cause of the achievement gap is the differential treatment that students receive. . . We always talk about the achievement gap, not the treatment gap (Willis, 1993)." Thus the stage was set for the school choice movement erupting in the 1990s and the problem addressed in the present study.

Problem Statement

Concerned by disparate treatment and outcomes in regular public schools and galvanized by the prospect of increasing academic and social performance, parents of African-American students across the United States have responded to the school choice movement. Although vouchers have generally eluded public embrace (27% of African-American and 15% of White parents think vouchers are an "excellent" idea, according to one poll, Public Agenda, 1998), charter schools have spread like wildfire, including the statutory provision for 100 charters in North Carolina. Nationally, 37 states, the District of Columbia, and Puerto Rico have signed into law charter school legislation. The US

Department of Education estimated that more than 2,400 charter schools operated in fall 2001, while the Center for Education Reform estimated that 580,000 students attended these schools (Center for Education Reform, 2002). Many parents, particularly those of African-American children, have enrolled their children in public charter schools wherever state law has provided for their existence.

Minority student participation in the charter school option is revealed in the US Department of Education's fourth-year national study of charter schools (Nelson, 2000) which found that, on average, charter schools in 1998-1999 enrolled a much larger percentage of African-American students (27% versus 17%) than all public schools in the 27 states with open charter schools. Mirroring the national trend, 47.3% of North Carolina students enrolled in charter schools were African-American, versus 31.8% for all public schools in the state. Notably, charters nationally also served a slightly higher percentage of students eligible for free or reduced-price lunch than all public schools (39% versus 37%) in the 27 states with open charters. By contrast, North Carolina charters served a slightly lower percentage (34.3% versus 36.5%). (See Table 1.)

Table 1
Percentage of African-American Students and Free/Reduced Price Lunch Participation in Charter and Regular Schools by US and NC

	US		NC	
	Charter	Regular	Charter	Regular
African-American	27.0	17.0	47.3	31.9
Free/Reduced Lunch	39.0	37.0	34.3	36.5

Regional and state achievement trends

The White-Minority achievement gap is particularly troubling for the southeastern region where African-American and poor students comprise a comparatively larger proportion of the school-age population than the rest of the nation (Hodgkinson, 2000). In Mississippi, for example, the youth population in 1990 was nearly one-half African-American while the national average was well-below one third. In every southeastern state except North Carolina, the rate of child poverty exceeds the national average.

Although differences in performance on the National Assessment of Educational Progress (NAEP) and the Scholastic Aptitude Test (SAT) narrowed in the 1980s, gaps in the academic achievement between White and African-American students continue remain unacceptably large (Jencks and Phillips, 1998). For example, NAEP data indicate that, since the mid 1970s, the math gap declined by nearly a third and the reading gap by almost half. Yet in 1996, White students were more than five times as likely as African-American students to score at or above the proficient level on the NAEP math exam. In graphing gap trends, Krueger and Whitmore (2001) used data from the National Center for Education Statistics to normalize White and African-American 17-and 9-year-old students' average scores on the NAEP math and reading exam such that the nationwide score and standard deviation in 1996 both equal one. By 1998 the math gap for 17-year-olds was nearly eight-tenths of a standard deviation; the reading gap was over one standard deviation. Gaps in the 9-year-old test data were equally dramatic. The math gap was nearly nine-tenths of a standard deviation; the reading gap was just over nine-tenths of a standard deviation.

Harman and Hood's (2000) analyses reveal that student achievement differences in 1998 North Carolina End-of-Grade test scores aggregated across grades 3-5 mirrors the national picture. Statewide statistics for percent on-grade level by ethnicity shows that 53.9% of African-American students versus 74.8% of White students read at or above grade level. Math scores show that 60.8% of African-Americans students versus 82.2% of White students achieve at or above grade level. Significantly, only 2% and 1.5% of all North Carolina schools serve African-American students who perform above the mean in reading and math respectively, whereas 14% and 13% perform one standard deviation or more below the mean in reading and math, respectively.

In schools serving large populations of minority students, southeastern educators and policymakers have responded with numerous strategies, including increased funding, enhanced teacher quality, improved technology, busing for racial balance, state curriculum frameworks, standards, assessment, and accountability systems, pay for performance, expanded learning opportunities, and whole-school reform models (Hassel, 2001). It was not, however, until the late 1990s that charter schools became an option for parents in the southeast, and even then on a limited basis. Restricted to regular public school conversions only (since amended to include start-up schools), Georgia passed the first charter school law in 1993, followed by the less restrictive laws of Florida, North Carolina, and South Carolina in 1996, and the very restrictive Mississippi law in 1997 establishing no more than one charter school per congressional district, for a maximum of five statewide. Alabama has yet to pass charter school legislation.

Although not created for the specific purpose of reducing the White-Minority achievement gap, charter schools enroll a disproportionate number of African-American

students whose rates of achievement will, in part, determine the whether or not the school retains its charter. We expect that charter school educators will leverage the greater autonomy afforded them to raise the achievement of African-American students in their charge. In fact, North Carolina charter schools whose stated mission is to serve at-risk (often minority) student populations are granted priority status in the approval process.

North Carolina Charter Context

To better understand the achievement gap issues related to charter schools, it is helpful to examine some of the context in which charters operate in North Carolina. Below is a brief overview of North Carolina charter school numbers, supervision, funding, missions, student demographics, school and class size, teacher experience, curriculum issues, and parental involvement.

North Carolina enacted its charter school law in 1996, and the first charter schools began operation in the 1997-98 school year. As of 2001-02, 95 charter schools were in operation across the state in 47 counties. The charters serve approximately 20,000 students, or roughly 1% of the state's total public school population (Center for Education Reform, 2002). Each North Carolina charter school is run by its own board of directors, which has the financial and legal responsibility for the school. The North Carolina Department of Public Instruction and the North Carolina Charter School Advisory Committee supervise the schools.

Charters receive state and local per pupil funding, state funds for handicapped students (as applicable), and funding from private or other donations, grants, etc. Charters have also had access to federal start-up funding. The majority of funds expended by charters are for employee (mostly teacher) salary and benefits, although charters spend

less in these areas than regular public schools. Charter schools also spend a greater proportion of their budget on purchased services and instructional equipment than other public schools. This difference is largely due to the fact that most charter schools have to purchase or rent their buildings (state law prohibits use of state funds to purchase land or buildings), and often contract out for services that regular public schools are able to provide for themselves (Noblit & Corbett, 2001).

The ability to choose their own mission, such as serving a special student population, is one of the signature freedoms charter schools enjoy. North Carolina charter schools are very diverse in terms of their missions. These include: "challenging gifted students; assisting students having difficulty in traditional public schools; maintaining small class and/or school size; facilitating individualized instruction; enhancing local control; providing arts-enriched or multiple intelligence-enhanced academic opportunities; increasing academic and/or behavioral discipline; returning to "the basics;" incorporating research-based instructional models or curricula; and/or attending to cultural enrichment" (ibid.).

A major evaluation of the North Carolina charter school program found that, in terms of students served, "charters overall are more ethnically homogeneous" than regular NC public schools. The non-White student population in NC charters ranges from 0 to 100%, and NC mirrors the national trend of enrolling a higher percentage of African-American students than regular public schools. For the 1999-2000 school year, 48% of NC charter school students were African-American. For the same period, African-American students comprised 31% of all regular public school students and 36% of all students in districts with charters in their attendance area. NC charters serve slightly more

male students (55%) than regular public schools (51%) and slightly fewer exceptional children than regular publics. NC charters have a considerably higher student turnover rate. Primary reasons for turnover given by administrators were discipline, transportation problems, the school's program not meeting student needs, and the school's environment being too structured (ibid.).

Additionally, more than one-third of NC charters choose to serve special populations of students. The types of students typically targeted are at-risk (e.g., academically at-risk, abused, dropouts, incarcerated); economically disadvantaged students; students who are academically gifted and/or college-bound; and students with special needs or disabilities. Some charters educate more than one type of special population (ibid.).

The special populations served by many NC charters have been partially responsible for what Noblit and Corbett consider charters' "primary innovation"- smaller schools and smaller classes (I-8). For the 1999-2000 school year, 78% of NC charters enrolled fewer than 300 students. State law requires a minimum of 65 students, but several charters have received waivers due to the special student populations (incarcerated youth, abused/neglected children) they serve. The range of student size in NC charters is 21 to 768. Charter schools also have substantially lower class sizes (average of 15 students) than regular public schools (average of 21) in NC[1] (ibid.).

Only 56% of the teachers in charter classrooms are licensed to teach in North Carolina. NC charter law requires that in charters serving K-5 students, 75% of teachers must be certified; for schools serving grades 6-12, 50% must be certified. Only 26% of

[1] Class size was computed by dividing the average daily student membership by the number of instructional classes (ibid).

charters serving grades K-5 meet or exceed the required level and 72% of schools serving grades 6-12 meet or exceed the required level. Also, charter teacher experience levels are behind that of regular public school teachers. Average number of years teaching experience for regular public school teachers is 13, while the average for charter teachers is 8.5 years (ibid.).

Nearly every charter school (95%) reported using the NC Standard Course of Study for its curriculum, possibly as a result of being required to use NC's state tests. A significant number of charters also used other curricula concurrently, most often Character Education, Core Knowledge, and Saxon Math (ibid.).

Lastly, parental involvement is a hallmark of charter schools. At least half of NC charter school principals reported that over 75% of their parents played a substantial role in their children's education. Noblit and Corbett noted several factors for this high level of involvement, including parents' roles in the schools' creation, the schools' missions to serve special student populations, and the need for parents to be proactive to enroll their children in the schools (ibid.).

Purpose of the Study

The purpose of the present study is to explore the impact of charter schools on the White-Minority student achievement gap in North Carolina. Examination of the test score gap between African-American minority students and Caucasian students in regular public schools will provide a benchmark by which to examine the gap reduction benefit of charter schools serving minorities and by which to target reduced-gap schools for further study.

Research Question

This study is guided by the following overarching question concerning the impact of charter schools on reducing the White-Minority achievement gap:

- In North Carolina charter schools serving students for two or more years, what levels of student achievement in reading and math End-of-Grade test scores do Whites and African-Americans in charter schools demonstrate compared to similar Whites and African-Americans in host district regular public schools?

Delimitations and Assumptions

By delimiting the examined charter schools to those extant for at least two years, we attempted to maximize the contribution of the school condition and minimize that of the ideographic variables. End-of-Grade test scores were collected from individuals at the same school for at least two years and are results for the 1999-2000 school year only. Delimiting the analysis to scores from the last year presumes that whatever benefit accrues over time from the school condition will be reliably demonstrated by those scores. Scores from host district regular public school students were restricted to the same condition—two years at the same school.

This exploratory study offers no explanations for discrepancies in achievement gap differences between charter schools and regular public schools. Charter schools, by their nature, have different reasons for existing and may target specific types of students than the "typical" regular public school. These differences may not be captured by traditional demographic variables.

Methodology

Data Sources

North Carolina End-of-Grade test scores for the 1999-2000 school year were used to compare the gap between (1) regular public school African-American students' test scores and those of regular public school White students; and (2) similar charter school African-American and White students' test scores. To maximize the contribution of school-based variables, we considered only scores of students enrolled for at least two years in the same school, charter or regular.

The North Carolina Department of Public Instruction provided the following test data files, stripped of all social security numbers and names of individuals but including all demographic variables:

1. End-of-Grade test-score data files for individual students attending the same charter school for 2 years, grades 3-8;
2. End-of-Grade test-score data files for individual students attending the same host district regular public school for 2 years, grades 3-8.

One critical aspect of a research study is the counterfactual (Mohr, 1992). That is, how similar are the control subjects to subjects receiving the treatment? The validity of a study's findings hinges on this issue. Thus, we matched individual students in charter schools with those in host public schools on the following eight criteria:

1. Local Education Agency
2. Ethnicity
3. Grade
4. Gender

5. Prior achievement
6. Parent Education
7. Free Lunch Status
8. Exceptionality Status

Analyses

Matched public students were first weighted to reflect the charter school sample. Sample means, gain scores, and proportions were then computed separately for African-American and White students in regular public and charter schools. As this is an exploratory study, no inferential tests were conducted. Student achievement was measured in two ways:

1. Student Academic Growth

North Carolina provides a developmental scale score that measure annual growth in student learning. As students progress from grade-to-grade, their scale score is expected to increase as they learn more. Thus, charter school students' progress can be compared to the progress of matched students in host district public schools. These growth scores were compared for African-American students in charter schools versus matched African-American students in public schools and to White students in public and charter schools. The White-African-American achievement gap is defined as a difference in scale score gains. If a difference is positive, the achievement gap was smaller. If the difference is negative, the achievement gap was larger.

2. Grade-Level Proficiency

On the North Carolina End-of-Grade tests, Levels I and II are considered below grade level; Level III is at grade level, and Level IV is above grade level. Thus,

proficiency is defined as achieving Level III or IV on an End-of-Grade test in reading or math. The White-African-American achievement gap is defined as a difference in proficiency.

Results

Growth Scores

Results from the matched sample are presented in Tables 2 and 3[2]. The overall results demonstrate that African-American students in public schools had greater achievement growth than their counterparts in charter schools in all six grades and in both reading and math. The achievement gap between African-American and White students tended to increase in more grades in both subjects for public and charter schools. The gap increased more in charter schools than in public schools across all grades and subjects, except for third grade math.

For math, the achievement gap decreased in grades 4 and 5. This gap reduction was greater in public schools than in charters. In reading, the gap was reduced in grades 3 and 7 for public and charter schools. Again, the reduction was greater in public schools. Additionally, there was a slight reduction in grade 8 reading for public schools.

Overall, White public school students exhibited greater achievement growth in the elementary grades than their charter school counterparts. White public school students had greater gains in reading for grade 6 as well. Conversely, White charter school students had greater gains in all three middle grades in math.

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[2] Results from the total sample of charter and public schools are provided in Appendix A. Similar results were obtained to those presented here.

Table 2
Reading Scale Score Growth by Student Ethnicity and School Type

Grade	African-American Growth		White Growth		(African-American – White) Difference	
	Charter (n=540)	Public (n=1665)	Charter (n=561)	Public (n=5362)	Charter	Public
3	3.14	7.11	6.68	8.83	-3.54	-1.71
4	0.55	2.97	2.86	3.50	-2.31	-0.53
5	4.84	6.71	2.95	3.64	**1.89**	**3.07**
6	0.19	1.38	2.19	2.37	-2.00	-0.99
7	2.61	3.60	2.57	2.01	**0.04**	**1.58**
8	1.61	2.91	3.06	2.80	-1.45	**0.11**

* Numbers in **Bold** indicate a decrease in the achievement gap between African-American and White students

Table 3
Math Scale Score Growth by Student Ethnicity and School Type

Grade	African-American Growth		White Growth		(African-American – White) Difference	
	Charter (n=517)	Public (n=1538)	Charter (n=528)	Public (n=4332)	Charter	Public
3	3.84	9.28	7.86	14.53	-4.03	-5.25
4	7.75	9.88	7.75	9.00	**0.01**	**0.88**
5	5.13	8.50	4.88	6.42	**0.24**	**2.08**
6	3.63	4.12	6.64	6.05	-3.01	-1.93
7	4.19	5.02	8.45	5.81	-4.25	-0.79
8	0.64	3.31	5.22	4.68	-4.57	-1.37

* Numbers in **Bold** indicate a decrease in the achievement gap between African-American and White students

Proficiency Attainment

Matched sample results for proficiency rates in reading and math are provided in Table 4. The proficiency rates are summarized across grades 3-8. (Similar proficiency rates would be expected given that students were matched on pre-test scores, if there were no differences in student achievement between public and charter schools.) Similar to the results shown in Tables 2 and 3, proficiency rates were higher for African-American public school students than their matched counterparts in charter schools. In reading, approximately 59% of African-American public school students attained

proficiency in reading and math compared to approximately 46% of African-Americans in charter schools. The percentage of African-American students attaining Level IV (above grade level) proficiency was also higher in public schools than in charter schools. Thus, the proficiency gap was greater in charter schools than in public schools.

Results for matched White students were similar. While both had high proficiency rates (over 90%), White public school students had higher proficiency in reading and math, although the percent of students attaining Level IV (above grade level) was slightly higher for White charter school students in reading.

Table 4
Proficiency Rates in Reading and Math by Student Ethnicity and School Type

Proficiency	African-American		White		(African-American – White) Difference	
	Charter	Public	Charter	Public	Charter	Public
Reading	45.5% (8.3% - IV)	58.8% (10.9% - IV)	92.4% (62.6% - IV)	95.2% (61.8% - IV)	-46.9% (-54.3% - IV)	-36.4% (-50.9% - IV)
Math	46.2% (8.9% - IV)	58.7% (13.2% - IV)	93.7% (67.2% - IV)	97% (73.9% - IV)	-47.5% (-58.3% - IV)	-38.3% (-60.7% - IV)

Discussion

Prior to this study, our professional experience in providing technical assistance to charter schools led us to believe that, as in their host district public school neighbors, student achievement varied widely. That an increasing number of African-American parents appeared to believe that charter schools would better serve their children than regular public schools, however, aroused our curiosity. The fundamental question seemed simple: Once in the charter schools, would African-American children do better than similar children in regular district schools? Clearly, education researchers prefer that education consumers make decisions on the basis of fact. Moreover, if we could discover

what is going on in the charter schools that seem to be reducing the achievement gap (if, in fact, that is the case), perhaps we could better assist all schools in doing likewise.

First, however, it is important to reiterate that no inferences can be drawn from the results of this study due to the quantitative-descriptive design employed. We conducted the research to explore and then make explicit the achievement of African-American children in charter schools compared to similar students who remain in regular public schools. Although it is tempting to conclude that North Carolina charter schools generally fail to reduce the White-Minority achievement gap (and, in fact, appear to increase the gap), the analyses simply do not support such an assertion. No causal links have been established.

Second, despite our attempt to control for location by matching students in charter schools with their host district peers, most North Carolina public school districts are coextensive with the entire county, and thus may include a combination of rural, suburban, and urban communities, conditions which research indicates are associated with varying levels of student achievement. It is important to note, however, that rather than due to inadequate design, the relatively small number of students enrolled in charter schools in any given district would have created untenable statistical instability in the study if additional controls were imposed.

Certain conclusions, however, appear unavoidable. This study found clear achievement patterns favoring North Carolina regular public schools. Thus far, charter schools do not appear to be a remedy for improving African-American achievement and closing the achievement gap. African-American students in public schools had greater achievement gains than their matched counterparts in charter schools. Additionally, the

gaps between African-Americans and Whites increased more so in North Carolina charter than in public schools in all six grades and in both reading and math, except for one.

Noblit and Corbett's (2001) study on North Carolina charter schools highlighted some of the issues confronting charter schools. Chief among these appears to be charter schools' apparent inability to recruit certified teachers in light of recent research (e.g., Sanders and Rivers, 1998) demonstrating the positive impact of teacher quality on student learning.

Finally, our findings indicate that regular public schools in our sample appear not to be closing the achievement gap between African-American and White students either, given seven out of twelve grade/subject combinations where the achievement gap increased and five where the gap decreased. Clearly more research is needed to develop strategies to overcome achievement gaps regardless of educational setting.

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Appendix A

Total Sample Results

Table A1
Scale Score Growth in Reading by Student Ethnicity and School Type

Grade	African-American Growth		White Growth		(African-American – White) Difference	
	Charter	*Public*	*Charter*	*Public*	*Charter*	*Public*
3	3.43	6.44	6.73	8.27	-3.3	-1.83
4	1.23	3.00	3.21	3.46	-1.98	-0.46
5	5.02	6.14	4.86	5.61	**0.16**	**0.53**
6	0.41	1.28	2.08	2.67	-1.67	-1.39
7	3.37	2.98	2.62	2.85	**0.75**	**0.13**
8	1.42	2.52	2.18	2.60	-0.76	-0.08

* Numbers in **Bold** indicate a decrease in the achievement gap between African-American and White students

Table A2
Scale Score Growth in Math by Student Ethnicity and School Type

Grade	African-American Growth		White Growth		(African-American – White) Difference	
	Charter	*Public*	*Charter*	*Public*	*Charter*	*Public*
3	4.07	9.57	9.61	13.24	-5.54	-3.67
4	8.42	10.08	8.63	9.53	-0.21	**0.55**
5	5.33	7.67	4.52	7.15	**0.81**	**0.52**
6	3.67	4.90	5.88	6.38	-2.21	-1.47
7	4.49	5.42	6.47	6.46	-1.98	-1.04
8	1.23	3.33	3.98	4.43	-2.75	-1.10

* Numbers in **Bold** indicate a decrease in the achievement gap between African-American and White students

Appendix B

A Summary of Independent Evaluations of Charter School Impact on Student Achievement

Miron and Nelson[3] found that, of the 38 states with charter laws, only 18 had conducted independent evaluations of their charter schools. The evaluations in seven of those states (California, Louisiana, Massachusetts, Minnesota, New Jersey, North Carolina, and Wisconsin) were so limited in scope and/or out of date as to not be considered in their analysis. Of the remaining 11 states with comprehensive and recent evaluations, only eight had evaluations that also addressed student achievement. Miron and Nelson analyzed the evaluations in these states (Arizona (2 studies), Colorado (5), Connecticut (1), District of Columbia (1), Georgia (1), Michigan (3), Pennsylvania (1), and Texas (1)) rating the quality of the studies' design and noting the degree of impact on student achievement reported.

The researchers rated the overall quality of the studies (based on the strength of the sample of charter schools included, strength of the quasi-experimental design used to compare charter school students with comparable non-charter students, and the number of years included in the study) as modest. They examined the studies' findings with and without respect to study quality and found that:

> ...charter schools have a mixed impact on student achievement. Focusing only on the highest quality studies, a study of Arizona provides relatively strong evidence of a positive charter school impact on student achievement. Other relatively high-quality studies of Texas and Connecticut produce weaker, though still positive, findings. The positive findings, however, are counterbalanced by relatively high quality studies that provide evidence of negative charter school

[3] Miron, G & Nelson, C. (2001, December). Student academic achievement in charter schools: What we know and why we know so little. Occasional Paper No. 41, Columbia University, National Center for the Study of Privatization in Education.

> impacts in Michigan and the District of Columbia. The lower-quality studies, as a group, provide a slightly more positive picture of charter schools' impact on student achievement, with a number of Colorado studies and a study of Georgia showing positive impacts and only two studies showing negative impacts. However, the addition of the lower-quality studies does relatively little to change the overall conclusion that evidence of charter schools' impact on student achievement is mixed (p. 24).

Since Miron and Nelson's paper was written, the results of a major independent evaluation of North Carolina charter schools have been published. Noblit and Corbett (2001) examined charter school academic achievement from the 1997-1998 through 2000-2001 school years. They concluded that "overall, students in grades 3 through 8 in North Carolina charter schools demonstrate lower overall achievement on EOG [state End-of Grade] tests than their peers in other public schools, and that this difference is more pronounced for Black students, especially in mathematics" (p. 81). The researchers also noted that the Black-White achievement gap in reading and mathematics was larger in charter schools than in regular public schools, but cautioned that their analyses do not tell "whether attending a charter school actually causes students to score any worse (or any better) than they would if they had attended a non-charter school" (ibid.).

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